

- A²
- (d) downloading, by the server process, the further segment of the file;
- and
- (e) repeating steps (c) and (d) until the server process has downloaded each segment of the file over the network.
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Remarks

Reconsideration of the present application is respectfully requested. Claims 20 and 28 have been amended. Claims 1-28 remain in the application for consideration.

Rejection under 35 U.S.C. § 102

Independent claim 28 stands rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,463,468 to Buch et al. ("Buch"). Buch discloses a technique for free Internet access which involves a method for downloading video advertising files when a user is not actively using the bandwidth of the Internet connection. As shown in FIG. 11 and described at column 12, Buch's method determines the ad block size based on the available data rate and perhaps also based on system resources. If the Internet connection is being used (e.g., to download content or to send/receive email), the method checks the availability of the connection again later. However, if the Internet connection is not being used, a request is sent to the ad server for information such as the file name, the offset from the file start where the block should be downloaded, and the determined ad block size.

Applicant has amended claim 28 to include the following language:

“provided the actual network bandwidth utilization is less than a threshold level below which data may be transferred over the network without interfering with other network activity, wherein the threshold level is calculated as a function of a maximum monitored level of actual network bandwidth utilization.” Clearly, amended claim 28 is not anticipated by Buch because Buch does not disclose the calculation of a threshold level of utilization as a function of a maximum monitored level of utilization. Rather, Buch teaches that the connection is either available (i.e., not in use) or unavailable (i.e., in use). There is no teaching or suggestion in Buch to monitor the level of actual network bandwidth utilization and calculate a threshold level as a function of the maximum monitored level of utilization as recited in amended claim 28. Accordingly, amended claim 28 is patentable over Buch, and Applicant respectfully requests withdrawal of the pending rejection.

Rejections under 35 U.S.C. § 103

The Office Action includes five rejections under 35 U.S.C. § 103(a). Claims 1-8 and 14-27 stand rejected under § 103(a) over U.S. Patent No. 5,913,040 to Rakavy et al. (“Rakavy”) in view of U.S. Patent No. 5,898,673 to Riggan et al. (“Riggan”). Dependent claim 9 is rejected under § 103(a) over Rakavy in view of Riggan, and further in view of Official Notice taken by the Examiner. Dependent claims 10 and 11 are rejected under § 103(a) over Rakavy in view of Riggan, and further in view of U.S. Patent No. 6,285,662 to Watanabe et al. (“Watanabe”). Dependent claim 12 stands rejected under § 103(a) over Rakavy in view of Riggan, and further in view of U.S. Patent No. 6,427,169 to Elzur et al. (“Elzur”). Dependent claim 13 is rejected under §

103(a) over Rakavy in view of Riggan, and further in view of U.S. Patent No. 6,427,169 to Kalkunte et al. ("Kalkunte"). For the reasons stated below, Applicant respectfully submits that claims 1-27 are patentable over the prior art.

Independent claims 1, 22 and 25 are patentable over the combination of Rakavy and Riggan because each independent claim includes a limitation relating to the calculation of a threshold level of utilization as a function of a maximum monitored level of actual network bandwidth utilization. As explained below, these claim limitations are neither taught nor suggested by the proposed combination of Rakavy and Riggan.

Referring initially to independent claim 1, the claimed method requires monitoring the level of actual network bandwidth utilization, identifying a maximum monitored level of actual utilization, calculating a threshold level of utilization as a function of the maximum monitored level of utilization, and, if the actual level is less than the threshold level, receiving at least a portion of the set of data over the network. Rakavy discloses a method for downloading data in the background without interfering with a user's other network activity by monitoring the percentage of time the network connection is busy over a given time period and only downloading data when the line utilization is below a predetermined threshold. While Rakavy's method and Applicant's claimed invention address essentially the same problem, Applicant's claimed invention provides a substantial advantage over Rakavy's solution in that it optimizes the use of network bandwidth. By contrast, Rakavy's solution is less effective because downloading data based on the percentage of time the network connection is busy will often result in underutilization of the network bandwidth (as explained in Applicant's specification at page 16, line 18 through page 17, line 1).

With respect to claim 1, the Office Action acknowledges that Rakavy fails to disclose "identifying a maximum monitored level of actual utilization and that the threshold level of utilization is calculated as function of the maximum monitored level of utilization" (Office Action at page 5). However, the Office Action contends that Riggan provides such a disclosure and that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Riggan with Rakavy to achieve the method of claim 1. Applicant respectfully disagrees.

9 Riggan is non-analogous art and thus not properly combinable with Rakavy. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). Riggan is directed to a solution for prevention of cell loss due to quality of service contracts in an ATM (Asynchronous Transfer Mode) network. Using ATM, different traffic types received in various user formats are segmented into fixed length cells that are transported to and reassembled into the original format at the destination node. Traffic management contracts between an ATM user and the network provider specify the quality of service (QoS) the ATM user can expect, including an amount of guaranteed bandwidth. When a user exceeds the agreed-upon bandwidth, the excess cells are liable to be discarded if the network is congested. Thus, users are typically required to pay for a larger bandwidth allocation, which can be relatively expensive. To prevent cell loss, Riggan defines a QoS threshold relative to the QoS bandwidth limit provided for by contract. Clearly, Riggan is not in the field of Applicant's endeavor. Moreover, Applicant

was concerned with the problem of downloading data in the background without interfering with a user's other network activity, not with preventing cell loss in an ATM network. Since Riggan is neither in the field of Applicant's endeavor nor reasonably pertinent to the particular problem with which Applicant was concerned, it cannot be relied on as a basis for rejecting claim 1.

Even if Riggan were analogous art, there is no suggestion from the prior art to combine its teaching with the teaching of Rakavy. In any event, combining the teachings of Rakavy and Riggan would not achieve the method of claim 1 because it would merely provide a method for negotiating a maximum bandwidth and arbitrarily setting a threshold at or below the negotiated bandwidth. There is no teaching in either reference to identify a maximum monitored level of actual utilization and to calculate a threshold level as a function of the maximum monitored level of utilization. There is also no suggestion from the prior art to modify Rakavy, Riggan or the combination of Rakavy and Riggan to achieve claim 1. For at least the reasons stated above, Applicant respectfully submits that independent claim 1 patentably distinguishes over Rakavy and Riggan, taken either individually or in combination.

Independent claim 22, which is directed to a data structure stored on a computer-readable medium, recites "wherein said second data field is derived from said first data field by calculating the threshold level as a function of the maximum monitored level." Similarly, independent claim 25 is directed to a computer-readable medium having computer-executable components including "a threshold calculating component which calculates a threshold level of utilization as a function of the maximum monitored level of utilization identified by said bandwidth monitoring component." Obviously

these limitations are similar to the “calculating a threshold level” limitation of claim 1. Thus, for at least the reasons stated above with respect to claim 1, Applicant respectfully submits that independent claims 22 and 25 are patentable over the proposed combination of Rakavy and Riggan.

Dependent claims 2-21, 23-24 and 26-27 are likewise patentable over the combination of Rakavy and Riggan for at least the reasons stated above with respect to their respective base claims 1, 22 and 25. Furthermore, many of the dependent claims are separately patentable because they contain additional limitations not found in either Rakavy or Riggan. As discussed below, dependent claims 9-13 are the subject of additional rejections based on additional prior art references.

Dependent claim 9 is directed to a method including “incrementing a counter each time a discrete portion of the data is received over the network.” The Office Action takes “Official Notice” that incrementing a counter each time a portion of data is received is well known in the art and contends that it would have been obvious to one of ordinary skill in the art combine this well known concept with the combined teachings of Rakavy and Riggan. However, as pointed out above, Rakavy and Riggan cannot properly be combined and would not achieve the claimed invention even if they were combined. Moreover, there is no suggestion from the prior art to combine the Official Notice with Rakavy and/or Riggan, nor is there a suggestion from the prior art to modify this combination of prior art references to achieve the invention of claim 9. Accordingly, Applicant submits that claim 9 is patentable over the proposed combination of Rakavy, Riggan and the Official Notice.

Dependent claims 10 and 11 are patentable for at least the reasons stated above with respect to independent claim 1 and dependent claim 9. Claims 10 and 11 are separately rejected over the combination of Rakavy, Riggan and Watanabe. However, as pointed out above, Rakavy and Riggan cannot properly be combined and would not achieve the claimed invention even if they were combined. Moreover, there is no suggestion from the prior art to combine Watanabe with Rakavy and/or Riggan, nor is there a suggestion from the prior art to modify this combination of prior art references to achieve the invention of claims 10 and 11. Accordingly, Applicant submits that claims 10 and 11 are patentable over the proposed combination of Rakavy, Riggan and Watanabe.

Dependent claim 12 is patentable for at least the reasons stated above with respect to independent claim 1 and dependent claim 9. Claim 12 is separately rejected over the combination of Rakavy, Riggan and Elzur. Elzur, which relates to parsing a packet header, is non-analogous art and thus cannot properly be relied on to reject claim 12 because it is neither in the field of Applicant's endeavor nor is it reasonably pertinent to the particular problem with which the Applicant was concerned. Rakavy, Riggan and Elzur cannot properly be combined and would not achieve the claimed invention even if they were combined. Moreover, there is no suggestion from the prior art to combine Elzur with Rakavy and/or Riggan, nor is there a suggestion from the prior art to modify this combination of prior art references to achieve the invention of claim 12. Accordingly, Applicant submits that claim 12 is patentable over the proposed combination of Rakavy, Riggan and Elzur.

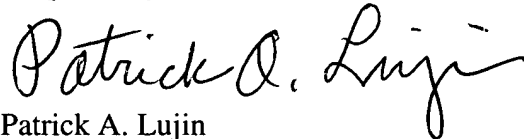
Finally, dependent claim 13 is patentable for at least the reasons stated above with respect to independent claim 1 and dependent claim 9. Claim 13 is separately

rejected over the combination of Rakavy, Riggan and Kalkunte. Like Riggan and Elzur, Kalkunte is non-analogous art and thus cannot properly be relied on to reject claim 13. Kalkunte, which relates to a method for selectively modifying collision delay intervals based on a detected capture effect in a half-duplex network, is neither in the field of Applicant's endeavor nor is it reasonably pertinent to the particular problem with which the Applicant was concerned. Rakavy, Riggan and Kalkunte cannot properly be combined and would not achieve the claimed invention even if they were combined. Moreover, there is no suggestion from the prior art to combine Kalkunte with Rakavy and/or Riggan, nor is there a suggestion from the prior art to modify this combination of prior art references to achieve the invention of claim 13. Accordingly, Applicant submits that claim 13 is patentable over the proposed combination of Rakavy, Riggan and Kalkunte.

Conclusion

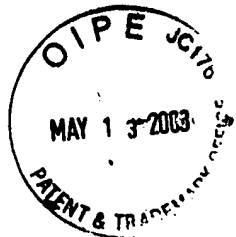
For the reasons stated above, claims 1-28 are now in condition for allowance. Applicants respectfully request withdrawal of the pending rejections and allowance of claims 1-28. If any issues remain which would prevent issuance of this application, the Examiner is urged to contact the undersigned prior to issuing a subsequent action. The Commissioner is hereby authorized to charge any additional amount required, or credit any overpayment, to Deposit Account No. 19-2112.

Respectfully submitted,



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Marked Up Version of Amended Claims Under 37 C.F.R. § 1.121(c)(1)(ii)

20. (Amended) A computer-readable medium having computer-executable instructions for performing the method [steps] recited in claim 1.

28. (Amended) A method of communicating between a client process and a server process over a network, the method comprising:

(a) issuing to the server process a first download request which identifies a file and which requests that the server process download a first segment of the file over the network, provided the actual network bandwidth utilization is less than a threshold level below which data may be transferred over the network without interfering with other network activity, wherein the threshold level is calculated as a function of a maximum monitored level of actual network bandwidth utilization;

(b) downloading, by the server process, the first segment of the file;

(c) issuing to the server process a further download request which is associated with the file and which requests that the server process download a further segment of the file over the network, provided the actual network bandwidth utilization is less than [a] the threshold level;

(d) downloading, by the server process, the further segment of the file;
and

(e) repeating steps (c) and (d) until the server process has downloaded each segment of the file over the network.